

Max's Mathematical Factors and Multiples Challenge

Learning objective: To identify, find, and describe factors and multiples of numbers up to 100.

Read each question carefully. Show your working out clearly in the space provided to help Max the monkey solve his puzzles.

Max the monkey is organising his collection of wooden blocks. He likes to arrange them into equal rows to find their factors, and he likes to skip-count to find their multiples. Help him finish his maths work!

Word bank: factor · multiple · product · divisible · remainder · prime · pair

1. Max has 12 blocks. List all the factor pairs of 12. (Hint: Think about the multiplication tables that result in 12). (3 marks)

2. Write down the first five multiples of 7. (2 marks)

3. Max says, 'I have a number. It is a multiple of 5 and it is also a multiple of 10. It is greater than 20 but less than 40.' What could Max's number be? (2 marks)

4. Is the number 7 a factor of 49? Explain how you know using your knowledge of multiplication tables. (2 marks)

5. Max buys 3 packs of stickers. Each pack costs £4. How many stickers would he have if each pack contained 8 stickers? Is the total number of stickers a multiple of 4? (3 marks)

Draw: Draw a square array of 16 blocks arranged in 4 rows of 4 to show why 4 is a factor of 16.



Extension challenge: Max has 24 building blocks. Can he arrange them into equal rows of 5? Explain why or why not using the word 'remainder'.